

Section 1014 - Technician Training and Qualification Program

1014.1 General

The purpose of the Technician Training and Qualification Program (TTQP) is to ensure quality sampling and testing of materials used in highway construction through the certification of industry and department personnel. UDOT's training program is administered by the Construction and Materials Quality Assurance Section.

Through a cooperative program of training, study and examination, technicians will be able to better ensure satisfactory materials control, identification of poor quality materials, and proper documentation for such. This program will allow the department to ensure that all tests performed on materials for acceptance are performed in accordance with the prescribed test procedures by qualified technicians.

1014.2 Technician Training

The technicians performing sampling and testing for a UDOT project must be trained in the respective areas of testing. Training provides a basic understanding of materials that will be used and the knowledge of sampling and testing techniques. It is also necessary that technicians be familiar with the equipment that is required for testing the material and understand how to operate it correctly.

Prior to qualification, all technicians receive on-the-job training on an individual basis under the direction of UDOT qualified lab supervisors or senior technicians prior to performing test procedures not previously performed. The technicians must demonstrate competency, proficiency and familiarity with applicable sampling and testing standards and specifications before performing testing duties. The procedure for on-the-job training (OJT) follows:

1. The technician applies to the OJT program. The application includes the following:
 - Personal information (name, address, phone, identification number)
 - The technician's projected workload (tests to be performed and projects worked on)
 - A commitment from the supervisor to support and train the technician.
 - The name and UDOT qualification number of the supervisor
2. The application is submitted to the QAS for acceptance based on the following:
 - Commitment of the supervisor
 - Presence of workload
 - Presence of required information
3. After the application is accepted:
 - The technician's name is entered into a database
 - The application is valid for one calendar year (a nominal fee (\$10.00) is assessed for a second application. A larger (\$50) fee is assessed for a third application)
4. The technician begins supervised OJT.
 - The technician may perform acceptance testing for any test listed on the application
 - Technicians not on the list may not be used for project acceptance
 - A qualified supervisor must sign the test reports
 - TTQP classes for qualification are scheduled as convenient (see #6 below)
5. Documentation of all training provided to each technician is recorded by the supervisor on the employee's "Technician Training and Evaluation Form" (1014.13). A copy of the completed form will be kept on file by the employee's supervisor and one copy submitted to the QAS before taking the certification courses.
6. The technician schedules and attends qualification classes.

- Classes must be scheduled within one year of beginning OJT
 - No fee will be assessed for the first two attempts. Significant fees will be assessed for the third and subsequent attempts.
 - The test is given with minimal review
 - No coaching on practical exams will be allowed
 - No immediate second chances will be allowed on the practical exams. The technician may restart the practical exam at any point if he/she identifies a mistake.
7. Qualification:
- The technician is tracked through the Central Materials database.
 - The technician is included in the UDOT IA program
 - Certification is valid for 3 years.
 - The technician is not allowed to perform any tests for acceptance if the qualification has lapsed.

1014.3 Technician Qualification

The UDOT Quality Assurance program requires individuals who perform Quality Control, Verification, Acceptance and Independent Assurance sampling and testing functions for the agency, contractor, vendor, or private labs be qualified under the UDOT TTQP. Qualification is obtained by successful completion of written and performance examinations established for the individual training programs. Technicians are only qualified to run materials tests that coincide with the level of qualification they possess. It is the responsibility of the Resident Engineer to verify each technician's level of qualification, before beginning of construction, to ensure that all tests performed on materials for acceptance are performed by qualified personnel.

1014.4 Supervisor Qualification

Lead technicians that directly supervise testing personnel that perform Quality Control, Verification, Acceptance and Independent Assurance sampling, testing and/or inspection functions for the agency, contractor, vendor, or private labs must have a minimum of 3-years experience in testing highway construction materials and be qualified for the same levels of UDOT TTQP qualifications as their direct reports. It is the responsibility of the UDOT Engineer to verify the materials testing supervisor meets the minimum qualifications before beginning of construction.

1014.5 Materials Testing Qualifications

Specialized training courses have been developed by the Quality Assurance Section and the Western Alliance for Quality Transportation Construction (WAQTC) for UDOT. These training courses cover the sampling and testing of soils, aggregates, asphalt binder, asphalt concrete mix and portland cement concrete. Obtain a copy of the UDOT "Registration, Policies, and Information Handbook," from the UDOT Quality Assurance Section, for detailed information on training requirements, course outlines and required prerequisites. UDOT accepts ACI Concrete Field Testing Grade One Qualifications for technicians performing materials tests on Portland cement concrete. A valid WAQTC Certificate in Concrete will be issued upon proof of ACI qualifications and is required for inclusion in UDOT TTQP.

1014.6 WAQTC Courses for Field Materials Testing Qualifications

1014.6.1 Levels of qualification available.

- Aggregate Testing Technician (AgTT)
- Asphalt Testing Technician (AsTT)
- Concrete Testing Technician (CTT)
- Embankment and Base/Density Testing Technician (EBTT/DTT)
- UDOT Laboratory Testing Technician (LbTT)

- UDOT Sampling and Density Testing Technician (SDTT)
- Superpave Mix Design

1014.7 UDOT Courses for Inspectors Certification Program

The courses listed below are proposed courses which are in various stages of development. The UDOT QA section will make each qualification module available as they are finished and deemed necessary to enhance UDOT's Quality Assurance Program:

Levels of Qualification

- Structures Inspection
- HMA Inspection
- PCCP Inspection
- Drainage Inspection
- Electrical Inspection
- Excavation and Embankment
- Construction Documentation

1014.8 Certification Requirements

An applicant must satisfy all course prerequisite requirements for each level of certification desired. Each level of certification will include successfully passing both a written and practical examination. An overall score of 70% with a minimum of 60% on any one test method is required on the written exam and the successful performance of the required tests as prescribed in the test procedures outlined in the course is required for the practical examination.

1014.9 Documentation

Upon the successful completion of the examination(s) given at the conclusion of each training course, the participant's name, home address, and company affiliation will be registered in the official registry for the appropriate level. The Quality Assurance Section will be responsible for maintaining documentation of all individuals qualified under the UDOT Technician Training and Qualification Program. Documentation retention will be for the life of the qualification.

1014.9.1 Qualification Documents retained:

Qualification Worksheets - A form used for performance evaluation of individual test methods.

Copies of written examinations.
A copy of qualification certificates issued.

1014.10 Re-certification

Re-certification is necessary every three years (ACI re-certification is necessary every 5 years). Certified technicians are responsible for applying for re-certification before the expiration date of the current level of certification.

1014.10.1 Re-certification may be obtained by:

Comprehensive Examination Re-certification - A certified individual who has an appreciable amount of documented work experience relating to the area of certification, prior to the expiration of the certification, may be allowed to test out with written approval from the individual's supervisor. Refer to the UDOT TTQP Registration and Policy Handbook for test-only fees.

1014.11 Decertification

Certification may be revoked if an individual is thought to have knowingly committed acts which are detrimental to the integrity of the UDOT Certification Program or the construction industry in general. If certification is revoked, the individual may not perform testing or manage test records that require a certified individual. Revocation could result in the possible suspension of an individual from working on any UDOT project.

1014.11.1 Acts which could result in revocation of certification privileges:

- Failure of a certificate holder to renew the certificate prior to the regular expiration.
- Falsification of field or quality control test results or records.
- Cheating on certification examination.
- Submittal of false information on certification applications.
- Termination of an individual due to job incompetence.
- Criminal action by an individual while engaged in construction activities.
- Failure to follow specification prescribed sampling/testing methods.
- Failure to pass a re-examination of written and practical skills.

1014.11.2 Decertification Procedure

Any individual, firm, agency or contractor associated with the Utah Department of Transportation may, by written letter, report a flagrant deficiency by a certified technician. The first response must be a written letter to the UDOT Quality Assurance Engineer. The Quality Assurance Engineer will follow the current adopted revocation of certification policy.

1014.12 Reciprocity

Reciprocal certification is done on a case by case basis. Refer to WAQTC “Registration, Policies, and Information Handbook” for information concerning reciprocity among member states. Training/Certification by WAQTC, ACI and the SHRP Regional Centers may provide automatic reciprocity.

1014.13 Technician Training and Evaluation Form

Date: _____

Technician / Trainee: _____

Test/Calabration Method	Check One:		Evaluated By:	Date	Results / Comments
	Initial Training	Yearly Eval.			

Additional Comments: _____

Next Evaluation: _____

Evaluator's Signature